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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,807	03/17/2004	Shih-Tsung Chen	23724-08324	5599

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EXAMINER

HOFFBERG, ROBERT JOSEPH

ART UNIT	PAPER NUMBER
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2835

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/803,807	Applicant(s) CHEN, SHIH-TSUNG	
	Examiner Robert J. Hoffberg	Art Unit 2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/17/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/27/04</u> <u>11/01/04</u> | 6) <input type="checkbox"/> Other: _____ |

Specification

1. The disclosure is objected to because of the following informalities: Para. 0008, line 1 and Para. 0009, line 1, change "apparati" to "apparatus" or "apparatuses". Para 0009, line 5, delete "must be".

Appropriate correction is required.

Claim Objections

2. Claim 8 and 9 are objected to because of the following informalities: "conductive grill" is not defined in the specification or the drawings and has been interpreted as "fins" for this examination. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1, 3, 8, 9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Mochizuki et al. (US 5,964,279).

With respect to Claim 1, Mochizuki et al. teaches that a cooling apparatus for a computer comprising: a conductive base plate (Fig. 12, #58) configured to be installed over a CPU (Fig. 12, #3) and to transfer heat therefrom; a heat conductor (Fig. 12, #65) thermally coupled to the base plate (Fig. 12, #58) adapted to carry heat transferred to the base plate by the CPU away from the base plate; a heat sink (Fig. 12, #61)

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thermally coupled to the heat conductor for dissipating heat carried by the heat conductor; a fan (Fig. 12, #67) for dispersing heat transferred to the heat sink; and a housing (Fig. 12, #1) for the heat sink and the fan configured to be installed adjacent to a window in a computer chassis such that the fan can direct airflow (Fig. 12, #68) through the heat sink and out the window (Fig. 1, #9).

With respect to Claim 3, Mochizuki et al. further teaches that the heat conductor comprises one or more heat pipes (Fig. 12, #65).

With respect to Claim 8, Mochizuki et al. further teaches that the heat conductor the heat sink comprises a conductive (Col. 3, line 63) grill (for the purposes of examining grill is interpreted as fins).

With respect to Claim 9, Mochizuki et al. further teaches the conductive grill (for the purposes of examining grill is interpreted as fins) is made of one of: copper and compression molded aluminum (Col. 3, line 63).

With respect to Claim 11, Mochizuki et al. teaches a method of cooling the interior of a computer chassis, the method comprising: transferring heat generated by a first component (Fig. 12, #3) in the computer chassis (Fig. 12, #10) to a heat sink (Fig. 12, #61) through a base member (Fig. 12, #58) installed adjacent to the first component and a cooling pipe (Fig. 12, #65) connected to the heat sink; and drawing ambient airflow (Fig. 12, #68) into the chassis through a first window (Fig. 1, #8) in the chassis, wherein the air flow is directed to pass over a second component (Fig. 1, #6) in the chassis, pass through a fan (Fig. 12, #67), and be blown by the fan over the heat sink (Fig. 1, #63) to outside (Fig. 1, #9) the chassis.

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5. Claim 12 is rejected under 35 U.S.C. 102(a) as being anticipated by Lo (US 6,418,018).

With respect to Claim 12, L teaches a cooling apparatus for a computer comprising: a circulation device (Fig. 1, #30) adapted to fit between a heat sink (Fig. 1, #50) to which heat from a computer CPU (Fig. 1, #24) can be transferred and a power supply (Fig. 1, #20) for the computer (Col. 1, line 6), wherein the circulation device is configured to be installed adjacent and parallel (see Fig. 1) to both the heat sink and the power supply, and to direct heat away from the heat sink and power supply out through a window (Col. 1, line 67) in a computer chassis (Fig. 1, #1).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki et al. (US 5,964,279), as applied to claim 1 above.

With respect to Claim 2, Mochizuki et al. teaches the cooling apparatus of claim 1. Mochizuki et al. does not teach the application of the computer chassis. While Mochizuki et al. fails to disclose the application of the computer chassis, it is obvious that the chassis has a size. It would have been obvious to one of ordinary skill in the art at the

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time of the invention was made to include a computer chassis size of a small form factor computer or any size which meets the application of the chassis.

8. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki et al. (US 5,964,279) as applied to claim 3 above, and further in view of Moore (US 5,982,616).

With respect to Claim 4, Mochizuki et al. teaches the cooling apparatus of claim 3. Mochizuki et al. does not teach the plurality of heat pipes. Moore teaches comprises a plurality of heat pipes (Fig. 2, #78), each heat pipe connected to the heat sink (Fig. 4, #52) through a hole (Col. 4, lines 11-15) to facilitate heat exchange therebetween. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the apparatus of Mochizuki et al. with that of Moore for the purpose of increasing the heat dissipation.

With respect to Claim 5, Mochizuki et al. teaches the cooling apparatus of claim 3. Mochizuki et al. does not teach the type of heat pipe. Moore teaches the heat pipes contain at least one of: a metal mesh grid and a liquid (Col. 4, line 14) for transferring the heat contained within the heat pipe. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the apparatus of Mochizuki et al. with that of Moore for the purpose of increasing the heat dissipation.

9. Claims 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki et al. (US 5,964,279) as applied to claim 1 above, and further in view of Usui et al. (US 2001/0030851).

With respect to Claim 6, Mochizuki et al. teaches the cooling apparatus of claim 1. Mochizuki et al. does not teach the airflow being drawn over the power supply. Usui et al. teaches airflow (see Fig. 12) is drawn over a power supply (Fig. 12, #34) installed within the computer chassis (Fig. 12, #10), removing heat therefrom. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the apparatus of Mochizuki et al. with that of Moore for the purpose of cooling the CPU and power supply with the same airflow. See also Lo (US 6,418,018).

With respect to claim 7, Mochizuki et al. teaches the cooling apparatus of claim 1. Mochizuki et al. does not teach the placement of the fan. Usui et al. further teaches the fan (Fig. 12, #36) is configured to face the power supply (Fig. 12, #34). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the apparatus of Mochizuki et al. with that of Moore for the purpose of cooling the CPU and power supply with the same fan.

10. Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki et al. (US 5,964,279) as applied to claim 1 above, in view of Yin (US 5,586,865).

With respect to Claim 10, Mochizuki et al. teaches the cooling apparatus of claim 1. Mochizuki et al. does not teach a screen over the window. Yin teaches a computer chassis (Fig. 1, #10C) comprising the window (Fig. 1, #10P) in the computer chassis, a screen (Fig. 3, #34S) over the window, and a second window configured to intake (Fig. 1, #10V) ambient air. It would have been obvious to one of ordinary skill in

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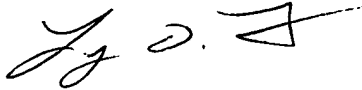
the art at the time of the invention was made to modify the apparatus of Mochizuki et al. with that of Moore for the purpose of creating a filtered airflow for cooling.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. With regard to Claim 12, Diemunsch (US 6,094,345) is cited to specifically show another example cooling apparatus for a computer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Hoffberg whose telephone number is (571) 272-2761. The examiner can normally be reached on 8:30 AM - 4:30 PM Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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